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Indian Standard

METHODS OF TEST FOR POLYVINYL CHLORIDE BOOTS

PART 4 DETERMINATION OF VOLATILITY

1. Scope — This standard (Part 4) prescribes the test procedure for determination of the volatility of components for polyvinyl chloride boots.

2. Apparatus

- **2.1** Oven A suitable oven with constant air circulation and capable of maintaining temperature at 135 \pm 5°C.
- 2.2 Desiccator See IS: 6128-1971 'Specification for desiccator'.
- 3. Test Pieces Disc of 57 mm diameter shall be cut from the boots. Condition the test piece for 24 hours at 27 \pm 2°C temperature and 65 \pm 5 percent relative humidity [see IS : 196-1966 'Atmospheric condition for testing (revised)'].
- 4. Procedure Weigh the test piece to the nearest 0·1 g in a dish. Heat it at $135 \pm 5^{\circ}$ C for 3 hours in the oven. Cool it in a desiccator and weigh. There shall be no discolouration at the end of the test on the test piece.

5. Calculation

5.1 Calculate the volatility as follows:

Volatility, percent by mass
$$=\frac{M_1-M_2}{M_1}\times 100$$

where

 M_1 = original mass in g of the test piece, and

 M_2 = mass in g of the test piece after heating.

EXPLANATORY NOTE

To avoid degradation, at the time of moulding temperature of polyvinyl chloride, determination of volatility of the material plays on important role.

Methods of test for polyvinyl chloride boots has been published in various parts as follows:

IS: 12240 Methods of test for polyvinyl chloride boots:

- Part 1 Measurement of thickness;
- Part 2 Determination of durometer hardness, shore A;
- Part 3 Determination of relative density:
- Part 5 Determination of lead content;
- Part 6 Determination of tensile strength and elongation at break:
- Part 7 Flexing test resistance to cut growth for soling material; and
- Part 8 Resistance to flexing for polyvinyl chloride upper material.

Adopted 1 January 1988

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